

ABSTRACT

A differential GPS or GLONASS system (collectively referred to herein as a 'GPS system') is implemented for use by a base station of a wireless telephone system (e.g., by a cellular telephone base station).

- 5 Using the differential GPS system, a differential location 'correction' factor is determined based on a difference between a received GPS location signal and a known fixed location of a GPS system receiver for the base station. A differential GPS correction signal containing the correction factor is transmitted to any or all cellular telephone users of that base
- 10 station to allow the cellular telephones to improve the accuracy of location information independently measured by GPS receivers located in each of the cellular telephones. The differential GPS signal may be used to increase the accuracy of the GPS system, whatever the current accuracy of the GPS system, allowing practical implementation of an emergency
- 15 telephone system such as a 911 system using a wireless system such as a cellular telephone system.